



f-POD Rallye

General Operators Instructions

30-07-2024



*Performance
Systems*

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Safety Instructions

The f-POD has been designed with total safety a priority including a sealed fuel system and a fully sealed electrical system, to reduce spark risk.

However, it is your responsibility to read and adhere to the instructions in this manual carefully. It is recommended when filling or emptying into a fuel that you use a sealed safety drum adaptor with an ATEX approved flame trap vent.

This f-POD is only intended for the adding or removal of fuel into or out of race cars and should only be filled or drained with fuel from and to approved fuel drums. It must not be used for any other application unless approved by the manufacturer.

Fire extinguishers, suitable for the type of fuel being used must be adjacent to the f-POD during use.

Suitable 'spill kits' should be available in the event of a leakage or spillage of fuel.

This f-POD must not be operated in the vicinity of naked flames or heat sources.

There must be no smoking whilst in the vicinity of the f-POD.

Operators must stay with the f-POD during all procedures.

The Grounding Cables, must always be attached to the f-POD and connected to the chassis of the race car and fuel container being filled or emptied, **before** the hoses are connected.

The f-POD must be drained fully after end of day use and before charging the battery.

Do not climb on or stand on the f-POD

The f-POD must be fully drained before transportation. Please study the Transport instructions carefully.

The f-POD must be regularly inspected for any leaks. EEC will not be responsible for any damage or considered pollution from any leakage.

If an operator comes into bodily contact with any fuel they should rinse thoroughly with water and seek immediate medical attention.

Only fully trained operators can use the f-POD.

Maintenance and repairs should only be carried out on the f-POD by persons trained and qualified to work in explosive atmospheres.

General

Read this manual carefully before using the f-POD. This manual contains essential information and instructions for the correct and safe use of the f-POD. If problems arise that could have been avoided by referring to this manual, your warranty could be affected.

Please contact us if you have any problems or questions.

Environment

The f-POD must at all times be kept in an upright position, including when in transport or storage.

The f-POD, is designed to be used indoors in a dry environment. It may be used outside as long as it is protected from precipitation.

For correct and accurate operation, it must be placed on a flat and level floor.

Recommended ambient temperature for operation should be between 0 and 40 degrees C.

Do not use around other systems that emit RF in the range of 10^4Hz to $3 \times 10^{11}\text{Hz}$

Do not use near sources of ionizing radiation.

The old parts and the f-POD itself, should be returned to EEC Performance Systems for correct and safe disposal at the end of its serviceable life.

Maintenance and Cleaning

Cleaning of the f-POD should be with a damp cloth. Be careful that no cleaning agents containing solvents are used. Do not use high pressure cleaning hoses on the f-POD.

Hoses, couplings and the grounding cables should be regularly inspected for damage. Control panel switches condition and operation should be intact and working correctly. Damaged hoses must be reported and changed. Do not repair or shorten hoses. This is not considered safe and will also affect the accuracy of your machine.

Outer covers can be removed to remove dust from component surfaces and inspect for leaks.

Hose and pipe line couplings must not be undone.

There are no operator serviceable parts inside the electrical box of the f-POD.

Any malfunctions must be reported to EEC Performance Systems for advice.

Only original spare parts can be fitted, only available from EEC Performance Systems.

The f-POD must be serviced annually, by EEC Performance Systems or by their nominated service agent.

Maintenance and repairs may only be carried out by persons with training and qualification of working in explosive atmospheres

General Specification f-POD Rallye

General Construction:	Aluminium & Ply Flightcase Construction Mounted on Plastic Feet. IP65 Sealed Steel Electrical Cabinet.
Dimensions:	490w x 640d x 710h mm
Gross Weight Empty:	60kg
Power Source:	Internal 12Vdc 55Ahr AGM Battery
Max Current Draw:	20Adc
Max Power:	240W
Suitable Fuels:	Petrol up to 15% alcohol blends (E15), Diesel up to 20% bio-diesel blends (B20), and Kerosene. For other application contact EEC Performance Systems for advice.
Ambient Temperature:	0 – 40 degree C
Maximum Use Per Day:	3 Hours overall
IP Rating:	Control Panel IP65
Noise:	Less than 70db(A)
Vibration:	Does Not Exceed 2.5m/s ²

Preparing the f-POD for use

Before the f-POD is switched on, you must have a suitable fire extinguisher available and kept adjacent to the machine.

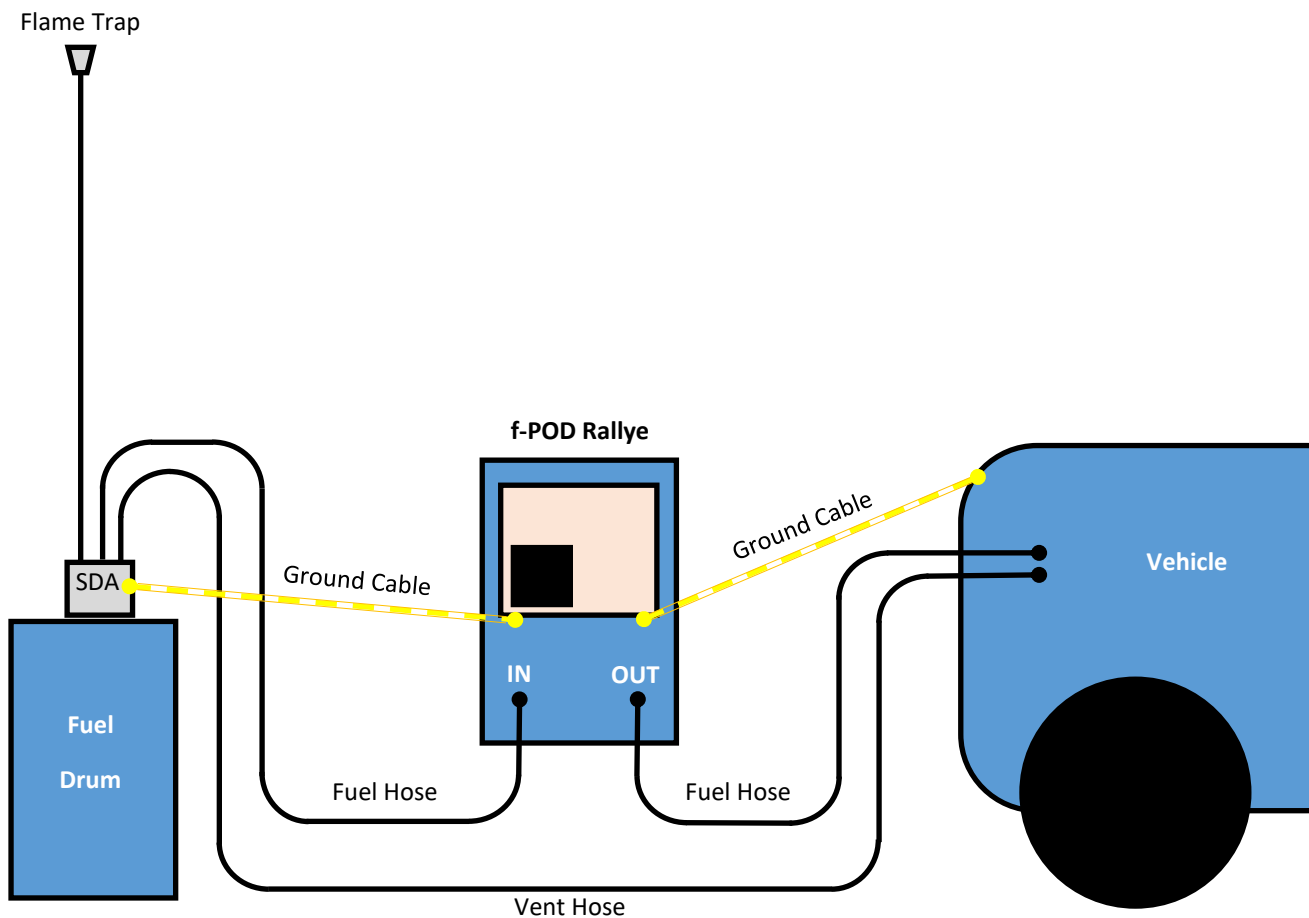
In the unlikely event of fire, switch the battery isolator to 'OFF', then perform your usual fire evacuation procedure.

Install the SDA (Safety Drum Adaptor) into a fuel drum, attach the flame trap hose to the SDA and attach the flame trap to a suitable raised support

Connect one ground cable to the stud on the SDA and connect the other ground cable to the chassis of the vehicle to be fuelled.

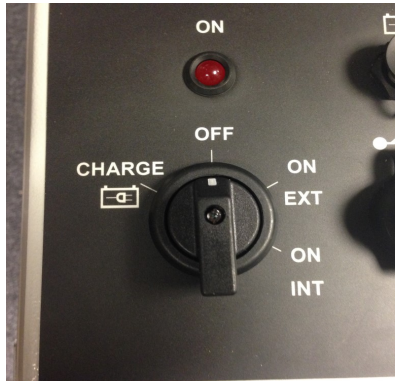
Connect one 3m fuel hose between the fuel marked dry break connector on the vehicle and the Fuel Out marked dry break connector on the f-POD.

Connect the 6m vent hose between the V marked dry break on the SDA and the vent marked dry break on the vehicle



To switch the f-POD on (Internal Battery)

Turn the Control Switch from 'OFF' to 'ON INT'



f-POD OFF



f-POD ON
LED INDICATOR ILLUMINATED

To switch the f-POD on (External Battery)

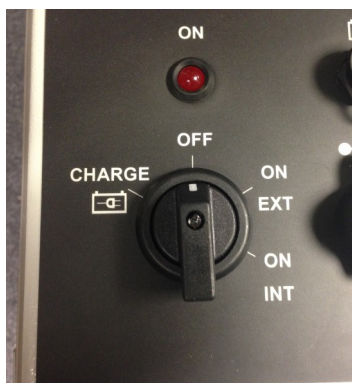
If the f-POD has insufficient charge left in the internal battery, a slave battery can be connected via the red 'Anderson' type connector on the top left hand side of the Control Panel.

Plug a suitable 12Vdc battery into the external battery socket. Please ensure your slave battery connections are the correct polarity with respect to the Anderson connector and make sure the connector on your battery connects or is in good condition and makes a good electrical connection. Poor intermittent connections can corrupt the f-POD software.

Turn the Control Switch from 'OFF' to 'ON EXT'



ANDERSON CONNECTOR
FOR EXTERNAL BATTERY





f-POD OFF




f-POD ON
EXTERNAL BATTERY


Setting Batch Target

1: Check Battery has sufficient charge—12.7V is fully charged. 12.0V is flat. Recharge as applicable

2: Set Batch Quantity: Press and Hold  &  until 'SET 0' displayed

3: Release button, 'SET BATCH' then '0.0' will be displayed with the far right digit flashing.

4: Adjust this digit to display required figure using 

5: To move left to the next digit press 

6: Repeat steps 4 & 5 until the required quantity is displayed to 1 decimal place

7: Press  &  then 'RUN' will be

displayed briefly, then '0.0' will be displayed.

The lower display will show the target set



Transferring Fuel

Please note that before the first batch is delivered the pipes will need priming - this can be done by transferring a small batch of say 5 litres into a spare drum.

1: To start transfer, Press the Green START Button and then press and hold the DEAD MANS button on the coiled cable. The display will start to count up in litres as fuel is transferred.

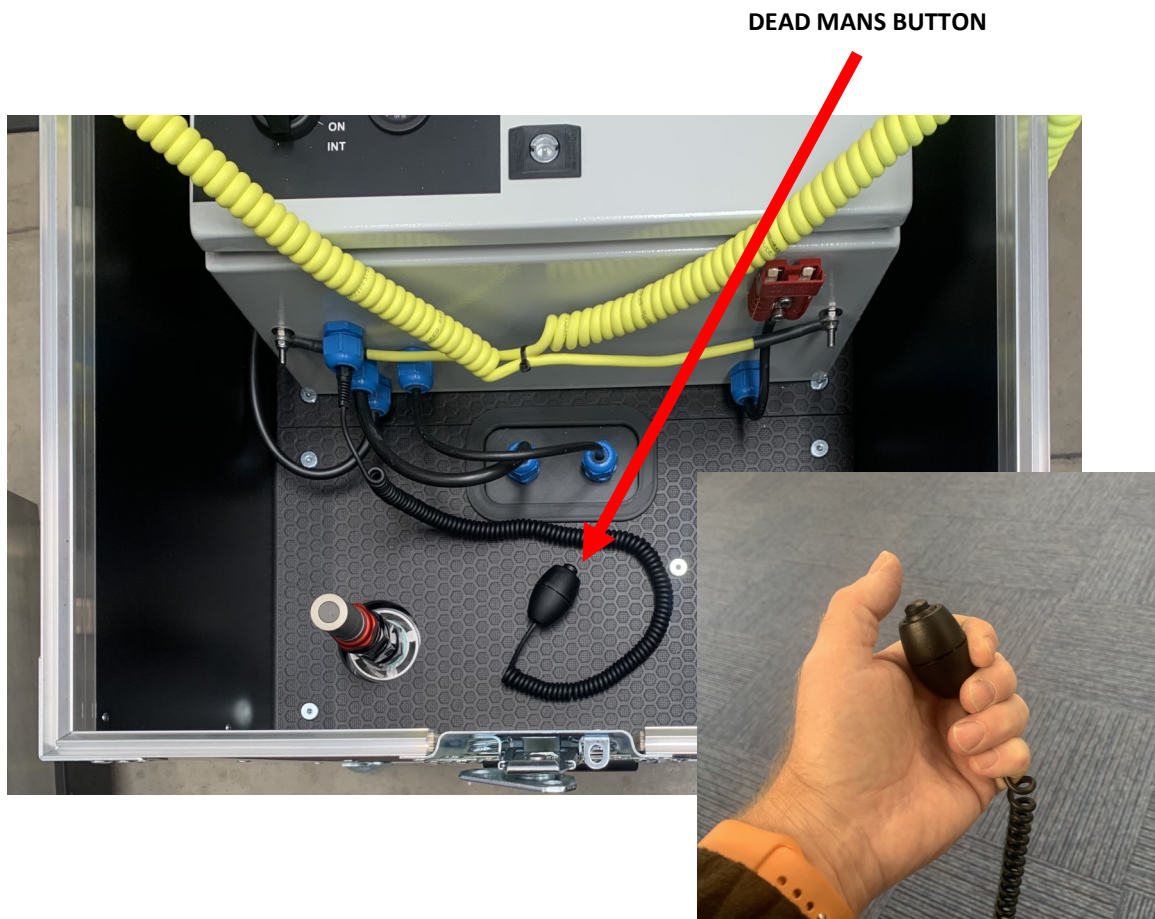
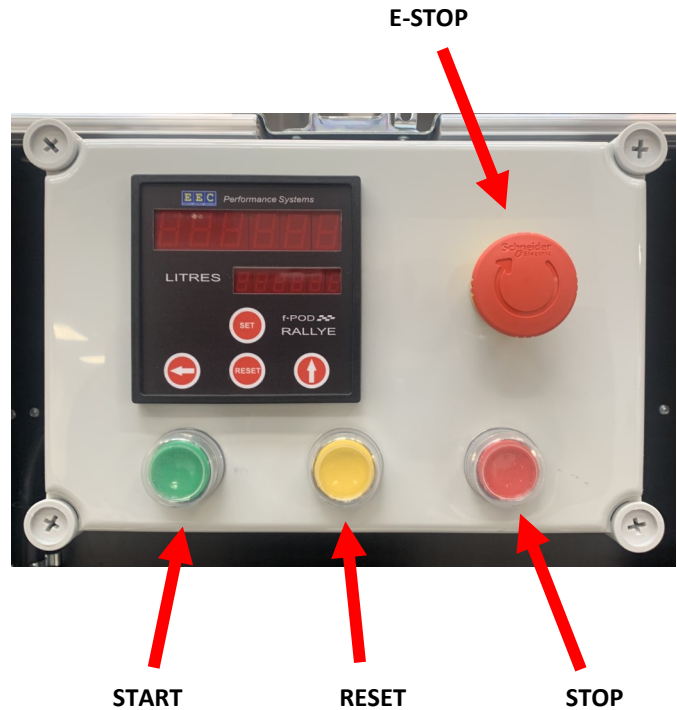
To pause the process, release the DEAD MANS button,

To stop the process press the red STOP button.

In an emergency, press the E-STOP button.

When the transfer process is complete, press the yellow RESET button to reset the display to zero.

To repeat the same batch quantity go to step 1.



E-Stop Switch Operation

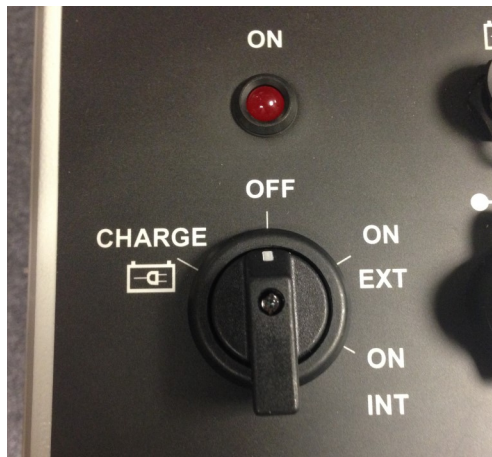
There is a red E-Stop or Emergency Stop button located on the far right hand side of the Control Panel.

If you have a need to stop the pumping procedure urgently, releasing either of the PUMP Buttons will stop the process. If for any reason the f-POD ECO fails to stop then push the red E-Stop button.

This will cut power to the pump immediately. When it is safe to continue, release the E-Stop button by gently twisting the red knob clockwise .

To switch the f-POD off

At the end of the day or you are wishing to charge the battery, you must empty the f-POD hose of fuel first.



Once the f-POD hoses are empty you can turn the Control Switch to 'OFF'

Charging The Battery

The battery must be charged regularly between use and overnight after use.

The f-POD internal battery must only be charged with the EEC supplied & approved battery charger.

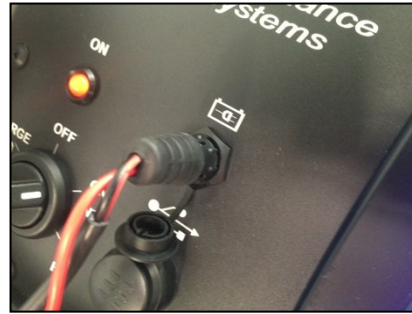
The battery charging circuit or procedure must not be modified in any way!

Do not power the battery charger from a portable generator.

Do not recharge the machine when in direct sunlight.

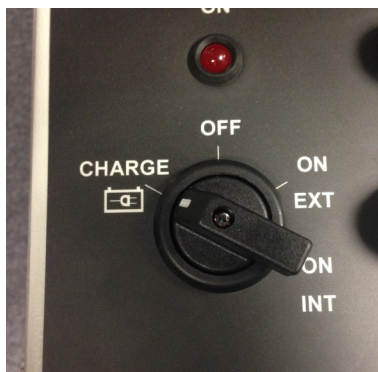


CHARGER SOCKET



BATTERY CHARGER CONNECTED

Plug the battery charger into a mains socket then turn the Control Switch to 'Charge' to begin charging.



Follow the information sheet supplied with the battery charger to ensure correct operation

When the battery is fully charged, unplug the charger from the mains, turn the battery isolation switch to 'OFF', disconnect the charger connector from the control panel and secure its sealing cap.

NUMAX

connect+forget

Operating Instructions.

Charging Cycle

Bulk Charging

- Switch on the charger. The LED light will show RED to indicate that bulk charging is taking place.

Absorption Charging

- When the battery is 95% charged the LED light will flash RED/GREEN to indicate that the second stage of charging is taking place.

Float Charging

- When the battery is 100% charged the LED light will turn to GREEN to indicate that the battery is ready for use.
- The battery should be left connected until you next require to use your battery. A regulated trickle charge voltage of no more than 13.8 volts and less than 1 amp of current is given to maintain the battery at 100% of full operational capacity.
- The float charge will not boil or heat batteries but will maintain the battery charge at 100% readiness and will prevent cycling during long term inactivity.

Usage

- If the battery is not removed from the application, make sure that the key or switch on the control panel is in the 'OFF' position.
- Connect the battery charger to the mains power supply. Do not turn on the mains supply.
- Connect the low voltage output of the battery charger either to a socket already hard-wired to the battery (one of these is provided in the box) or directly to the battery by means of the crocodile clips provided. If connected by means of croc. clips, first connect the RED grip to the positive terminal, then connect the BLACK grip to the negative terminal. Switch on at mains.
- To disconnect the battery charger, reverse the order of operation. After use, do not leave the battery charger disconnected from the mains and connected to the battery to prevent the battery from discharging.

Safety

- Connect the battery charger to a mains power outlet which has the same voltage and frequency as that shown on the charger itself. The socket used must be efficient and safe.
- If extension cables are used these must have plugs complying with safety regulations.
- Place the battery charger in a stable, dry and clean location and prevent both charger and cable from coming into contact with water or dirt.
- Carry out re-charging operations at an ambient temperature between 0 degrees C and 38 degrees C, as shown in the instructions for using the battery charger and the instructions for using the application in which the battery is fitted.
- Do not use the battery charger if it has been damaged or if you are in doubt about its efficiency after having been dropped or knocked.

EC Declaration of Conformity

In accordance with BS EN ISO/IEC 17050-1:2010

We: Essential Equipment Consortium Ltd

Of: Unit C6 Optimus Way, Leicester, LE3 8JR. United Kingdom

declare that:

Equipment: Intelligent Race Fuel Bowser

Model name/number: f-POD Rallye FPR050

in accordance with the following Directives:

2014/30/EC	Conforms with the essential performance requirements of the Electromagnetic Compatibility Directive and its amending directives
2006/42/EC	Conforms with the essential health and safety requirements of the Machinery Directive and its amending directives
2015/863/EU	Conforms with the requirements of the RoHS Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment

has been designed and manufactured to the following specifications:

EN ISO 12100:2010

Safety of machinery - General principles for design - Risk assessment and risk reduction

EN 1127-1:2019

Explosive atmospheres - Explosion prevention and protection - Part 1: Basic concepts and methodology

EN 61326-1:2013

Electrical equipment for measurement, control and laboratory use - EMC requirements -- Part 1: General requirements

EN 61000-3-2:2006

Electromagnetic compatibility (EMC) -- Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)

EN 61000-3-3:2008

Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection

I hereby declare that the equipment named above has been tested and found to comply with the relevant sections of the above referenced specifications. The unit complies with all relevant essential requirements of the Directives.

Signed by:

Position: **Director**

Done at: **LE3 8JR**

On:

This declaration of conformity is issued under the sole responsibility of Essential Equipment Consortium Ltd